INFORMATION DISCLOSURE
CITATION

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1579-863

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10/686,529

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1645

U.S. PATENT DOCUMENTS

EXAMINER INITIAL	DOCUMENT NUMBER	DATE	NAME	CLASS		FILING DATE IF APPROPRIATE
				CLASS	SUBCLASS	
RZ	AR 6,096,497	8/2000	Bauer			
	BR 6,130,037	10/2000	Lennox et al.			
	CR 6,197,534 B1	03/2001	Lakowicz et al.			
	DR 6,231,733 B1	05/2001	Nilsson et al.			
	ER 6,248,229 B1	06/2001	Meade			
	FR 6,277,627 B1	08/2001	Hellinga			
	GR 6,521,446 B1	02/2003	Hellinga			
	HR 6,663,862 B1	12/2003	Hellinga et al.			
	IR 2002/0004217 A1	01/2002	Hellinga			
	JR 2003/0129622 A1	07/2003	Hellinga et al.			
	KR 2004/0038378 A1	02/2004	Hellinga et al.			
RZ	LR 2004/0118681 A1	06/2004	Hellinga et al.			
RZ	MR 2004/0229290 A1	11/2004	Hellinga et al.			

FOREIGN PATENT DOCUMENTS

DOCUMENT	DATE	COUNTRY	TRANSLATION		
			CLASS	SUBCLASS	YES NO
RZ NR WO 98/53849	12/1998	WIPO			
	OR WO 98/55853	12/1998	WIPO		
	PR WO 99/34212	07/1999	WIPO		
	QR WO 00/74728 A1	12/2000	WIPO		
	RR WO 03/021247 A1	03/2003	WIPO		
	SR WO 2004/36176 A2	04/2004	WIPO		
	TR WO 2004/36176 A3	04/2004	WIPO		
RZ UR WO 2005/07806 A2	01/2005	WIPO			

OTHER DOCUMENTS (including Author, Date, Title, Citation, etc.)

RZ VR	Allert et al. "Computational design of receptors for an organophosphate surrogate of the nerve agent soman" Proc. Natl. Acad. Sci. USA 101:7907-7912 (2004)
RZ WR	Benson et al. "Construction of a novel redox protein by rational design: Conversion of a disulfide bridge into a mononuclear iron – sulfur center" Biochemistry 37:7070-7076 (1998)
RZ XR	Benson et al. "The development of new biotechnologies using metalloprotein design" Curr. Opin. Biotechnol. 9:370-376 (1998)
RZ YR	Benson et al. "Rational design of nascent metalloenzymes" Proc. Natl. Acad. Sci. USA 97:6292-6297 (2000)
RZ ZR	Benson et al. "Design by bioelectronic interfaces by exploiting hinge-bending motions in proteins" Science 293:1641-1644 (2001)
RZ AAR	Benson et al. "Converting a maltose receptor into a nascent binuclear copper oxygenase by computational design" Biochemistry 41:3262-3269 (2002)
RZ BBR	Bolon et al. "De novo design of biocatalysts" Curr. Opin. Chem. Biol. 6:125-129 (2002)
RZ CCR	Bontidean et al. "Detection of heavy metal ions at femtomolar levels using protein-based biosensors" Anal. Chem. 70:4162-4169 (1998)
RZ DDR	Boos et al. "Transport properties of the galactose-binding protein of <i>Escherichia coli</i> " J. Biol. Chem. 247:917-924 (1972)
RZ EER	Brune et al. "Direct, real-time measurement of rapid inorganic phosphate release using a novel fluorescent probe and its application to actomyosin subfragment 1 ATPase" Biochemistry 33:8262-8271 (1994)

*Examiner

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2/21/06

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INFORMATION DISCLOSURE
CITATION

ATTY. DOCKET NO.

1579-863
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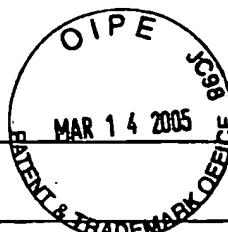
OTHER DOCUMENTS (including Author, Date, Title, Citation, etc.)

R2	AR	Careaga et al. "Large amplitude twisting motions of an interdomain hinge: A disulfide trapping study of the galactose-glucose binding protein" Biochemistry 34:3048-3055 (1995)
R2	BR	Coldren et al. "The rational design and construction of a cuboidal iron-sulfur protein" Proc. Natl. Acad. Sci. USA 94:6635-6640 (1997)
R2	CR	Dattelbaum et al. "Analysis of allosteric signal transduction mechanisms in an engineered fluorescent maltose biosensor" Protein Sci. 14:284-291 (2005)
R2	DR	De Lorimer et al. "Construction of a fluorescent biosensor family" Protein Sci. 11:2655-2675 (2002)
R2	ER	Drueckhammer "New approaches to fluorescence based glucose sensors" Database FEDRIP on Dialog, NTIS, 00313296, Identifying No. 1R21DK55234-01 – Abstract (1998)
R2	FR	Dwyer et al. "Computational design of a Zn ²⁺ receptor that controls bacterial gene expression" Proc. Natl. Acad. Sci. USA 100:11255-11260 (2003)
R2	GR	Dwyer et al. "Computational design of a biologically active enzyme" Science 304:1967-1971 (2004)
R2	HR	Dwyer et al. "Periplasmic binding proteins: A versatile superfamily for protein engineering" Curr. Opin. Struct. Biol. 14:495-504 (2004)
R2	IR	Hellinga "Metalloprotein design" Curr. Opin. Biotechnol. 7:437-441 (1996)
R2	JR	Hellinga "The construction of metal centers in proteins by rational design" Fold. Des. 3:R1-R8 (1998)
R2	KR	Hellinga "Computational protein engineering" Nature Struct. Biol. 5:525-527 (1998)
R2	LR	Hellinga et al. "Protein engineering and the development of generic biosensors" Trends Biotechnol. 16:183-189 (1998)
R2	MR	Li et al. "Comparative stereochemical analysis of glucose-binding proteins for rational design of glucose-specific agents" J. Biomater. Sci. Polymer Edn. 9:327-344 (1998)
R2	NR	Looger et al. "Computational design of receptor and sensor proteins with novel functions" Nature 423:185-190 (2003)
R2	OR	Marvin et al. "The rational design of allosteric interactions in a monomeric protein and its applications to the construction of biosensors" Proc. Natl. Acad. Sci. USA 94:4366-4371 (1997)
R2	PR	Marvin et al. "Engineering biosensors by introducing fluorescent allosteric signal transducers: Construction of a novel glucose sensor" J. Amer. Chem. Soc. 120:7-11 (1998)
R2	QR	Marvin et al. "Conversion of a maltose receptor into a zinc biosensor by computational design" Proc. Natl. Acad. Sci. USA 98:4955-4960 (2001)
R2	RR	Marvin et al. "Manipulation of ligand binding affinity by exploitation of conformational coupling" Nature Struc. Biol. 8:795-798 (2001)
R2	SR	Pickup "Developing glucose sensors for <i>in vivo</i> use" Trends Biotech. 11:285-291 (1993)
R2	TR	Pinto et al. "Construction of a catalytically active iron superoxide dismutase by rational protein design" Proc. Natl. Acad. Sci. USA 94:5562-5567 (1997)
R2	UR	Rao "Protein engineered glucose sensor" Database FEDRIP on Dialog, NTIS, 00352410, Identifying No. 1R01RR14170-01 – Abstract (1998)
R2	VR	Rougier et al. "Use of lectin to detect the sugar components of maize root cap slime" J. Histochem. Cytochem. 27:878-881 (1979)
R2	WR	Sloan et al. "Structure-based engineering of environmentally sensitive fluorophores for monitoring protein-protein interactions" Protein Eng. 11:819-823 (1998)
R2	XR	Sternet et al. "De novo design of an enzyme" Science 304:1916-1917 (2004)
R2	YR	Street et al. "Computational protein design" Structure Fold. Des. 7:R105-R109 (1999)
R2	ZR	Tolosa et al. "Glucose sensor for low-cost lifetime-based sensing using a genetically engineered protein" Anal. Biochemistry 267:114-120 (1999)

*Examiner

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2/21/06

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DOCUMENT	DATE	COUNTRY	TRANSLATION		
			CLASS	SUBCLASS	YES NO
ER					
FR					
GR					

OTHER DOCUMENTS (including Author, Date, Title, Citation, etc.)

R2	HR	Vyas et al. "Crystallographic analysis of the epimeric and anomeric specificity of the periplasmic transport/chemosensory protein receptor for D-glucose and D-galactose" Biochemistry 33:4762-4768 (1994)
R2	IR	Wilkins et al. "Glucose monitoring: State of the art and future possibilities" Med. Eng. Phys. 18:273-288 (1996)
R2	JR	Wisz et al. "Construction of a family of Cys ₂ His ₂ zinc binding sites in the hydrophobic core of thioredoxin by structure-based design" Biochemistry 37:8269-8277 (1998)
R2	KR	Wisz et al. "An empirical model for electrostatic interactions in proteins incorporating multiple geometry-dependent dielectric constants" Proteins 51:360-377 (2003)
R2	LR	Yang et al. "Structural analysis, identification, and design of calcium-binding sites in proteins" Proteins 47:344-356 (2002)
R2	MR	Yang et al. "Rational design of a calcium-binding protein" J. Amer. Chem. Soc. 125:6165-6171 (2003)
R2	NR	Int'l Search Report for related Int'l Patent Appln. No. PCT/US2003/032581 dated June 8, 2004
	OR	
	PR	
	QR	
*Examiner	<i>Robert Fenn</i>	
	2/16/06	